



Wittmann Area Drainage Master Study

Project Background

In April 2003, the Flood Control District of Maricopa County began an Area Drainage Master Study Update (updating the 1989 study) for the Trilby Watershed, which includes Morristown, Circle City, Wittmann, parts of the Cities of Surprise and Peoria and a small part of the Town Buckeye. Significant changes in recent years required a study update, which has now been completed.

The Wittmann study area is rapidly growing with 68 percent of the land available for development. As more development occurs, it is critical that it does not increase drainage or runoff in the area.



Study Area

The Trilby watershed is 307 square miles bounded by the Hieroglyphic Mountains on the north, the White Tanks Mountains and McMicken Dam on the south, Beardsley Canal and the Agua Fria River on the east and the Hassayampa River basin on the west.

All water in this watershed eventually drains to McMicken Dam at the south end of the study area, and is discharged into the Agua Fria River. This area is characterized by a sharp contrast between flat plains and mountains, with much of the watershed still retaining its natural vegetation.

Purpose and Goals

The purpose of the Wittmann Area Drainage Master Study Update was to identify flooding problems, flooding sources, and flooding hazards in the study area and identify potential solutions. The Study elements that were performed are as follows:

- A comprehensive list of the flooding,

erosion and sediment transport issues in the study area were identified and mapped,

- New floodplains were delineated and existing floodplains were updated,
- Alternative analysis and solutions for McMicken Dam issues were generated,
- An analysis of possible alternatives to alleviate or mitigate the issues identified were listed and grouped,
- Interim "Rules of Development" to guide future development were drafted, and
- Developed the technical basis to begin the Area Drainage Master Plan.

Of the 400 to 600 linear miles of potential watercourses in the area, 200 linear miles of floodplains have been delineated; an additional 150 linear miles were delineated in this study. Erosion hazards, as defined by Arizona statutes, were identified with about 20 lineal miles being delineated.

Project Benefits

The Wittmann Area Drainage Master Study Update provided the following:

- Allowed the Flood Control District to identify flood and erosion hazards ahead of development,
- Provided fiscally responsible solutions for flood hazards saving taxpayer dollars,
- Enhances the quality of life through diminishing the impacts of flooding, and
- Increases the opportunity for multi-use facilities.

Possible Solutions Brainstorming

The following categories were developed from the possible solutions identified by property owners, developers, District staff and the Consultant Team:

- No Further Action
- Public Education
- Regional Retention
- Flood Warning System
- Transportation Corridors
- Culvert Sizing Guidelines
- Additional Regulations/Tools
- Drainage Feature Information
- Detention at Upstream side of CAP
- Major Drainage Corridors Preservation
- Remediation of Roadway
- Drainage Impacts Floodplain Delineation and Erosion Hazard Zones



Sheet flow in August 2003 Storm
Photography courtesy of KPHO, Channel 5

Project - Next Steps

The Area Drainage Master Study Update finalized in April will complete the technical analysis for the area. When and District staff will begin the Master Plan to identify possible alternatives to address the identified flooding and drainage issues in this area. Recommendations for potential flooding and regulatory solutions will be developed; final recommendations will be completed around the Fall of 2006.

Opportunities will be offered to the public to provide input throughout the process.



Contact

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